

REMARKS

This patent application is a continuation of Application No. 09/378,201 filed August 19, 1999. Reconsideration of this application, as amended, is respectfully requested. This amendment is responsive to the Office Action mailed December 18, 2001 in the parent application and to the Advisory Action mailed May 25, 2002 in the parent application..

Claims 1-19 are pending. Claims 1, 6-7, 10-11, and 17-18 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,169,735 B1 of Allen, Jr., et al. ("Allen"). Claims 2, 8-9, and 12-13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Allen in view of U.S. Patent No. 6,064,651 of Rogers, et al. ("Rogers"). The Examiner has stated in the parent application that claims 3-5 and 14-16 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Claim 19 has been allowed in the parent application.

Claims 1, 3-5, and 17-18 are amended. Applicants respectfully submit that the amendments made herein do not add new matter.

In the Advisory Action mailed May 23, 2002 in the parent application, the Examiner states that applicants' reply filed May 6, 2002 fails to place the application in condition for allowance. In particular, the Examiner states the following:

Continuation of 5. does NOT place the application in condition for allowance because: claims 1, 6, 7, 10, 11, 17, and 18 merely claim encapsulating data into IP packets and transporting IP packets whereby Allen, Jr., et al. in col. 16 line 55 to col. 17 line 8 which recite using the Internet Protocol IP packets, the Internet connections, and the Internet service provides for carrying data clearly reads on encapsulating data into IP packets and transporting IP packets as now argued in pages 2-7.

(page 2, Advisory Action 05/23/2002)

Applicants respectfully submit that amended claim 1 is not anticipated by Allen. Claim 1 includes the following limitations:

configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function;

encapsulating data received at a constant bit rate at the local networking function into a plurality of IP packets configured according to the CES; and

transporting the IP packets from the local interworking function to the remote interworking function according to the CES.

Allen discloses an ATM-based distributed virtual tandem switching system including an ATM switching network, a trunk interworking function (TIWF) device, and a centralized control and signaling interworking function (CS-IWF). In particular, Allen discloses a method of employing a CES to transport voice, converting an origination trunk to ATM cells, and transmitting the voice within the ATM cells (see col. 6, lines 43-50).

Allen does not disclose configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function, as recited in claim 1. Therefore, Allen does not disclose each and every limitation of claim 1. As such, claim 1 is not anticipated by Allen.

Given that claims 6-7 and 10-11 depend directly or indirectly from claim 1, applicants submit that claims 6-7 and 10-11 are not anticipated by Allen.

Moreover, applicants submit that amended claim 17 is not anticipated by Allen under 35 U.S.C. § 102(e). Claim 17 includes the following limitations:

a machine readable storage medium having stored thereon a plurality machine executable instructions; and

said instructions, when executed, to implement a method comprising configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function;
encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and
transporting the IP packets from the local interworking function to the remote interworking function according to the CES.

Allen does not disclose configuring a circuit emulation services (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function, as recited in claim 17. Thus claim 17 is not anticipated by Allen.

Furthermore, applicants submit that amended claim 18 is not anticipated by Allen under 35 U.S.C. § 102(e). Claim 18 includes the following limitations:

first circuitry to configure a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function;
second circuitry to encapsulate data received at a constant bit rate at the local interworking function in to plurality of IP packets configured according to the CES; and
third circuitry to transport the IP packets from the local interworking function to the remote interworking function according to the CES.

Allen does not disclose the first circuitry to configure a circuit emulation services (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function, as recited in claim 18. Thus, claim 18 is not anticipated by Allen.

The Examiner has rejected claims 2, 8-9, and 12-13 under 35 U.S.C. § 103(a) as being unpatentable over Allen in view of U.S. Patent No. 6,064,651 of Rogers, et al.

("Roger"). In particular, the Examiner states:

Allen, Jr. et al. did not recite attaching a CES header comprising a version number to each IP packet as in claims 8-9, the circuit header comprising at least a circuit identification, a flag field, sequence number, octet padding values and a data field as in claims 12-13, and the maximum delay variation as in claim 2.

Rogers, et al., teach that it is known to provide the step of traffic shaping for altering the traffic characteristics of a stream of cells on a VCC or a VPC to achieve a desired modification of those traffic characteristics, in order to achieve better network efficiency whilst meeting the QoS objectives or to ensure conformance at a subsequent interface whereby traffic shaping maintains cell sequence integrity on the connection as set forth at col. 3 lines 31-40 and Fig. 2 which shows the connection parameters written into the cell header in the field of digital and multiplex communications clearly anticipate the CES header comprising the version number to each IP packet, the circuit identification, the flag field, sequence number, octet padding values and data field as in claims 8-9 and 12-13. Col. 1 lines 48-57 which recite means for providing mounded packet delay variation (commonly referred to as cell delay variation) which clearly anticipates the maximum delay variation as in claim 2.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the CES header comprising the version number to each IP packet, the circuit identification, the flag field, sequence number, octet padding values and data field as taught by Rogers et al. to the system of Allen, Jr. et al. because Rogers et al. teach the desirable advantage of achieving better network efficiency whilst meeting the QoS objectives and ensure conformance at a subsequent interface and said better network efficiency being desirable to achieve efficient system operation in Allen, Jr. et al.

(pp. 6-7 Office Action 12/18/2001).

Applicants respectfully submit that Rogers does not cure the deficiencies of Allen with respect to amended claim 1.

Rogers discloses a method of traffic shaping for causing the time multiplexed packet flows at queuing points within such networks or network elements to conform to specified traffic descriptors. Rogers also discloses that it is known to provide the step of

traffic shaping for altering the traffic characteristics of a stream of cells on a VCC or a VPC to achieve a desired modification of those traffic characteristics (see col. 3, lines 31-40).

A distinction of claim 1 over Rogers is that claim 1 refers to a method of configuring a CES over an IP network, the CES being configured to establish a tunnel between a local internetworking function and a remote internetworking function. Another distinction of claim 1 over Rogers is that claim 1 refers to a method of encapsulating data in IP packets. Yet another distinction of claim 1 over Rogers is that claim 1 refers to a method of transporting the IP packets.

Therefore, Rogers does not disclose each and every limitation of claim 1.

Applicants also respectfully submit that Allen does not teach or suggest a combination with Rogers and that Rogers does not teach or suggest a combination with Allen. It would be impermissible hindsight based on applicants' own disclosure to combine Allen with Rogers.

Furthermore, even if Allen and Rogers were combined, such a combination would lack configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and a remote interworking function, as recited in claim 1.

Therefore, Allen and Rogers, either individually or in combination, do not disclose each and every limitation of claim 1. As such, claim 1 is not rendered obvious by Allen in view of Rogers under 35 U.S.C. § 103(a).

Given that claims 2, 8-9, and 12-13 depend directly or indirectly from claim 1, applicants submit that claims 2, 8-9, and 12-13 are not obvious over Allen in view of Rogers.

Furthermore, given that claims 3-5 and 14-16 depend directly or indirectly from claim 1, applicants submit that claims 3-5 and 14-16 are allowable. Therefore, favorable action is solicited.

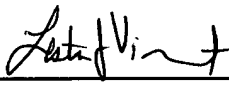
It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections have been overcome. Accordingly, applicants request that claims 1-19 be found in condition for allowance.

If there are any additional charges not covered by any check submitted, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

A marked up version of the amended claims __ is provided below. Additions are indicated with “_____” and deletions are indicated with “[].”

Please amend claims 1, 3-5, and 17-18 as follows:

1. (Amended) A method comprising:

configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between a local interworking function and [to] a remote interworking function;

encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and

transporting the IP packets from the local interworking function to the remote interworking function according to the CES.
3. (Amended) The method of claim 1 wherein [configuring the CES comprises establishing a] the tunnel is established to carry the plurality of IP packets between the local and remote interworking functions.
4. (Amended) The method of claim 1 [3] wherein the tunnel comprises a layer 2 tunneling protocol (L2TP) tunnel and L2TP tunnel session within the L2TP tunnel.
5. (Amended) The method of claim 1 [3] wherein the tunnel comprises a multi-protocol label switching (MPLS) tunnel.
17. (Amended) An article of manufacture comprising:

a machine readable storage medium having stored thereon a plurality machine executable instructions; and

said instructions, when executed, to implement a method comprising
configuring a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between [from] a local interworking function and [to] a remote interworking function;

encapsulating data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and

transporting the IP packets from the local interworking function to the remote interworking function according to the CES.

18. (Amended) An apparatus comprising:

first circuitry to configure a circuit emulation service (CES) over an internet protocol (IP) network based on properties of the IP network, the CES being configured to establish a tunnel between [from] a local interworking function and [to] a remote interworking function;

second circuitry to encapsulate data received at a constant bit rate at the local interworking function into a plurality of IP packets configured according to the CES; and

third circuitry to transport the IP packets from the local interworking function to the remote interworking function according to the CES.